

### L.6.1 TECHNICAL PROPOSALS

The technical proposal must address all the elements in Section C, Statement of Need. The technical proposal will be used to evaluate an Offerors' ability to provide and perform the requirements detailed in Section C. Offerors should bear in mind that Risk will be assessed for all elements of the technical proposal.

The technical proposal must be organized with sections tabbed and arranged as described in L.6.1.1. The arrangement will follow the elements of Section C for the most part. The technical proposal, at the least, should describe the Offeror's response to the requirements contained in Section C. The technical proposal should include additional information the Offeror believes will more completely describe their ability to meet NOAA's needs.

The technical proposal must be prepared using the Times New Roman font in 12 point size for all text portions. It must be formatted to print double-sided on 8.5" by 11" paper with 1" margins on all sides. Page numbers must be printed in the bottom margin, centered, in the format "section - page", where section is the Section C section number, and page begins at 1 for each section. The requested hardcopies must be bound.

The technical proposal must use October 1, 2006, as the start of the R&D HPCS system life. Upgrades must be specified as "month/year. The acceptance test for each upgrade starts on the first day of the specified month.

The technical proposal must not exceed 165 pages in length (83 sheets of paper when printed double sided). The final revision of the technical proposal must be provided as a complete document, not as change pages. In addition, a change document must be provided in which all deleted text is marked with a "strikeout" (i.e., ~~strikeout~~) and added or modified text is yellow color-highlighted (i.e., yellow-color highlighted).

The technical proposal organization is provided below. Instructions are provided and Section C text has been paraphrased for the sake of brevity. Offerors must refer to Section C for the full text. A requirements matrix has been provided in Section L.6.1.1, Tab 1A. Offerors shall follow the instructions in TAB 1A for completing the matrix. The matrix does not count towards the page count for the technical proposal.

#### L.6.1.1 Technical Proposal Organization

##### **TAB 1 PROCUREMENT OBJECTIVES**

Demonstrate your understanding of NOAA's new approach for managing its HPC resources based on its functional requirements as described in C.1.

Explain how your proposed solution meets NOAA's current programmatic requirements, as represented by the funding profile presented in Table I in section C.4.3, and how your proposed solution can adapt to possible changes in these requirements.

##### **TAB 1A REQUIREMENTS MATRIX**

A Microsoft Excel file (see Section J.6) is provided to the Offerors to complete. The Offerors will complete the two (2) columns marked "Vendor Reference". The Offerors shall provide the page

number and tab reference from their proposal that addresses each item in the matrix. If an Offeror chooses not to address any particular item in the matrix they will designate in the tab column for that item the letter “N”.

## **TAB 2 BENCHMARKS**

Describe how the benchmark requirements described in section C.4.2 will be achieved during the base contract period. Include in the description a detailed plan for meeting the requirements for the initial deliveries that are required in Q1FY2007. Include in the description a detailed plan for meeting the requirement for maximum System Life Throughput obtained by a significant mid-life upgrade that will not front-load or back-load performance. The mid-contract upgrades [for all workstreams](#) are desired to occur in Q2 or Q3FY2008. Follow the instructions that are described in Section J and use the spreadsheets that are provided for submitting benchmark results.

Supply complete Disk –I/O Worksheets (See Section J.5) for each subsystem and upgrade. Offerors shall describe how the details of the proposed I/O subsystem architecture(s) (i.e. numbers and types of hardware and software, etc.) will provide the Theoretical Data Rates stated in the I/O spreadsheet for each of the filesystems offered.

## **TAB 3 HPC SUB-SYSTEM COMPONENTS**

Provide a high-level system description of the proposed R&D HPCS that meets the requirements described in section C.5 for the base contract period. For the initial delivery, the Government expects this description to closely parallel the delivered system. For the upgrade, the Government requires a similar, but less detailed description. Describe system components, such as nodes and interconnect fabric, and the overall architecture of the system with particular attention to performance and system dependability. Describe design aspects that maximize performance such as different node types, memory distribution, etc. Include diagrams and specifications of all major sub-system components. Include in the description the rationale used to select the various brand components that comprise the proposed HPCS. List the various brand components that were considered along with any performance specifications or test results that were used in the selection of the proposed HPCS. Describe if the Offeror will provide the Government with any pre-delivery access to the system and how it will be implemented.

### **TAB 3.1 Large Scale Computing Component (LSC)**

Describe how the proposed LSC will meet the requirements described in section C.5.1.1 for the base contract period. Include in this description the calculation used to compute the system life throughput for the LSC. For each upgrade, identify the sources of the expected increase in performance. For each upgrade, show how the proposed performance level was calculated. Provide a plan for how the vendor will meet the SLT guarantees should the system fail to meet the proposed performance.

### **TAB 3.2 Interactive Component**

Describe how the proposed developmental component will meet the requirements described in section C.5.1.2 for the base contract period.

C. A breakout by labor category of all services proposed (e.g., hardware maintenance, software maintenance, on-site applications analyst, etc.) and total price for each item. A separate breakout is required for each year of the base contract period.

D. A detailed description and breakout of any other price proposed (e.g. communications, power, cooling, etc.)

E. Separate pricing for all of the options described in section C.9.

L.6.2.3 If proposed, cost information for each subcontractor and consultant shall be furnished in the same format and level of detail as prescribed for the prime Offeror. Additionally, the Offeror shall submit the following information:

- 1.A description of the items to be furnished by the subcontractor.
- 2.Identification of the proposed subcontractor and an explanation of why and how the proposed subcontractor was selected including the extent of competition obtained.
- 3.The proposed subcontract price, the Offeror's cost or price analysis thereof, and performance/delivery schedule.
- 4.Identification of the type of subcontract to be used.

L.6.2.4 Offerors are not required to submit certified cost or pricing data with their cost proposal. Full-and-open competition will be used to determine prices fair and reasonable. However, Offerors may be requested to provide additional information in the event prices appear over-stated or under-stated.

#### L.6.2.5 Funding Profiles

Table I shows anticipated total available funding in \$ millions for the contract years

	<i>Base Period</i>			<i>Option Period</i>				<i>One-Year Options</i>
Fiscal Years	2007	2008	2009	2010	2011	2012	2013	2010/2014
Contract Years (Base and Options)	\$21.57	\$21.8	\$21.8	\$21.8	\$21.8	\$21.8	\$21.8	\$10.9

Table II shows total funding in \$ millions minus the 6% reserve for the contract years

	<i>Base Period</i>			<i>Option Period</i>				<i>One-Year Options</i>
Fiscal Years	2007	2008	2009	2010	2011	2012	2013	2010/2014
Contract Years (Base and Options)	\$20.28	\$20.49	\$20.49	\$20.49	\$20.49	\$20.49	\$20.49	\$10.25

Table III shows the expected funding ceilings in \$ millions for the Contract Augmentation and Engineering support Options

Fiscal Years		2007	2008	2009	2010	2011	2012	2013	2010/2014
Contract Augmentations and Engineering Support		\$22.91	\$22.91	\$22.91	\$22.91	\$22.91	\$22.91	\$22.91	\$10.72

Offerors are required to submit cost/price proposals based upon Tables II and III. Table II covers the base contract period, the four-year option period, and the one-year contract transition period. Table III contains funding that Government may put on the contract for additional R&D HPCS Augmentations (C.9.4) and Engineering support (C.9.5).

L.6.2.6 As stated in Section B, the Government anticipates leasing the equipment during the base contract period and the option contract period. However, the Government will acquire ownership of the Hierarchical Storage Management System (HSMS) upon delivery, acceptance, and payment. The Government requires delivery of the HSMS during the initial year of the base contract period, and the initial year of the option contract period, should the option be exercised. Multiple deliveries of storage media may be provided over the term of the contract. The storage media will become Government property upon delivery, acceptance, and payment.

Any lease resulting from this Solicitation must be determined an “operating lease” in accordance with the policies set forth in Office of Management and Budget (OMB) Circular A-11 and the Federal Accounting Standards Advisory Board (FASAB). Accordingly, offerors are required to submit the following pricing information for the base contract period:

1. monthly lease price by component
2. monthly lease price for each software package
3. monthly maintenance price for leased hardware and software
4. monthly price associated with taxes
5. monthly price associated with insurance
6. monthly facilities rental (if applicable)
7. Communication costs (if applicable)
8. Power and cooling costs
9. Interest rate used to calculate lease payments.